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LOOK WHO'S ENERGIZING THE COMMUNITY FREDERICK COUNTY LFGE RECOGNITION CEREMONY



On September 9, 2010, Frederick County commissioners gathered at a ceremony at the Reich's Ford Road Landfill in Frederick, Maryland to recognize the Landfill Gas to Energy (LFGE) Facility. The LFGE facility began commercial operations on June 1, 2010 and uses the landfill gas to fuel two Jenbacher GS 320 reciprocating engines which produce and export 2 megawatts of renewable electricity to the grid. The facility's annual reduction of greenhouse gases is equivalent to the emissions of approximately 16,200 vehicles. The Authority assisted the County in procuring a vendor for the facility and overseeing construction. The Authority will continue to

manage the project for the next 20 years. The facility is owned and operated by Energenic.

Chris Voell, from the Environmental Protection Agency presented recognition posters to the Frederick County Commissioners, Energenic and the Authority for their efforts in bringing this "green" energy facility to Maryland.


Chris Voell (EPA)

presenting the recognition
poster to Frederick County
Commissioners and staff. ▼

2010

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MONTGOMERY COUNTY RRF EARNS GOLD EXCELLENCE AWARD FROM SWANA

The Montgomery County Resource Recovery Facility was awarded the 2010 Solid Waste Association of North America Gold Excellence Award in Waste-to-Energy. The award was presented during ceremonies held at SWANA's annual WASTECON® convention in Boston, MA in August.

The Resource Recovery Facility (RRF), located in Dickerson, MD, is owned by the Authority on behalf of Montgomery County and operated by Covanta Montgomery, Inc. On a daily basis, it safely and cleanly converts non-recycled waste into

enough electricity to run the facility and power an additional 40,000 households each year. Since beginning operations in 1995, the RRF has converted some 8 million tons of solid waste into enough electricity to power more than a half million homes.

The RRF became the first publicly owned facility to incorporate Covanta's LNT™ (Low NOx) technology in 2009. This technology reduces emissions of Nitrous Oxides (NOx) by half while using the same amount of ammonia reagent as other NOx reducing technologies. The installation of the LNT™ project also included the installation of a new aqueous ammonia tank

and duct system which eliminated the storage and use of less stable anhydrous ammonia. Additionally, recent investments in the facility's wastewater treatment system have reduced the discharge of suspended solids into the environment by 28%.

This is the third time that this facility has won SWANA's Gold Award, having won it previously in 1998 and 2005. The RRF has also been recognized for its innovation and operations by the American Society of Civil Engineers, the American Society of Mechanical Engineers, and the American Academy of Environmental Engineers. For more information about this facility, please visit www.nmwda.org/about/mcrrf.asp.



ANDREW KAYS ELECTED TO SWANA MID-ATLANTIC CHAPTER BOARD OF DIRECTORS

The Mid-Atlantic Chapter of the Solid Waste Association of North America (SWANA) held its annual meeting on September 29, 2010. Andrew Kays, Authority Project Manager, was part of the slate of Chapter Directors elected at the meeting for the 2010-2011 term. Mr. Kays is SWANA certified as a Manager of Landfill Operations (MOLO) and joins a Board of Directors comprised of municipal and private sector solid waste

and recycling professionals.

The Mid-Atlantic Chapter is comprised of members from Maryland, Delaware and the District of Columbia. There are regular meetings wherein members share operational knowledge. The Chapter also produces a quarterly newsletter and maintains an annual scholarship program to eligible students working toward undergraduate or graduate college degrees. Directors on the Chapter Board volunteer for various committees that address the recycling and solid waste concerns



of the broader Chapter membership. SWANA is the national organization that represents more than 8,000 members nationwide and provides

professional development training and advocacy for its members.

For more information on the Mid-Atlantic Chapter please see www.swana-midatl.org or contact Andrew Kays at 410-333-2730.

2010

ANNUAL REPORT LETTER

This year, the Northeast Maryland Waste Disposal Authority focused on providing our Member Jurisdictions with the assistance necessary to keep them at the forefront of recycling waste materials, creating renewable energy, and managing resources in waste. Here are the highlights of 2010's accomplishments.

Waste Sort Analysis, Landfill Gas Collection Underway

In Anne Arundel County, the first phase of a two-season waste sort took place in December 2009. The Authority planned the sort and provided on-call engineers from SCS to supervise 20 students who sorted waste entering the County's landfill. The sort focused on the material types accepted in the County's current recyclables program. Sort data will be used to analyze the progress of the recycling program and aid in targeting education. This data is useful for all of our programs, and will be shared with our other Member Jurisdictions.

The Authority currently is designing and developing a landfill gas collection system at Northern Landfill in Carroll County. During operation and after closure, landfills generate various gases, including methane, as the organic matter decomposes. Under the Federal Resource Conservation and Recovery Act, solid waste management facilities are required to control the migration of landfill gas, primarily due to the explosive potential of methane.

Frederick/Carroll Counties Renewable Energy Facility Moves Forward

After years of evaluating long-term waste management options, a majority of the Frederick and Carroll Boards of County Commissioners voted to enter into an agreement with the Authority to develop a 1,500 ton-per-day waste-to-energy facility that will work in combination with waste reduction and recycling as a long-term solution to the County's waste management needs. The facility will provide 100 percent of both counties' governmental electricity needs, allowing the two counties to be among the first in the nation to be Net

Zero Energy governments. A ferrous and non-ferrous metal recovery system will recover about 10,000 tons of metals that remain in the waste after the counties' recycling programs. Wastewater from the adjacent wastewater treatment plant will provide the process water and sewage sludge will be combusted, and energy recovered. The WTE facility will provide a stable economic solution for the waste disposal and renewable energy needs of Frederick and Carroll counties.

Generating Income from Waste To Energy Projects for Local Governments

We are excited to report that construction of the landfill gas-to-energy systems at Gude and Oaks landfills in Montgomery County is complete, and after performing a few last details, they began commercial operations in July 2009. These systems reduce consumption of fossil fuel, reduce green house gas emissions and generate much needed electricity.

There are two additional benefits of Montgomery County's landfill gas projects. First, the Authority has sold 16,997 renewable energy credits (RECS) at an average price of \$13.97 for total revenue of \$237,512 through June 30, 2010. Second, by bidding the landfill gas units into the market for capacity credits, the County will realize increased revenues in 2010 of approximately \$150,000 per year.

Similar measures are benefitting Prince George's County, where the Authority continues to market the sale of RECs generated from that County's landfill gas-to-energy projects. In FY2010, the Authority sold more than \$174,000 of RECs from this project. The Authority Board has been very generous in providing their knowledge and experience to non-member local governments such as Prince George's County.

Solar Projects Update

The Authority competed for and was awarded more than \$700,000 in grant funds for two solar projects. These projects are the only solid-waste projects receiving grant awards under the SunBurst Program. These funds will reduce the cost of solar energy to Montgomery and Howard counties.

The Montgomery County project is at the Transfer Station in Derwood, MD. The main Transfer Station roof is about 52,500 square

feet, and the roof on the new addition is about 17,325 square feet. In the first year of operation, approximately 335,545 kWh of electricity, or 15% of the annual electricity load, will be generated (construction completed August 2010).

The Howard County project, currently under procurement review, is located in Ellicott City at the closed New Cut Road landfill. It will supply electricity to Worthington Elementary School which is adjacent to the landfill property.

Other Projects

We continue to support regional recycling efforts by maintaining our informative website, www.mdrecycles.org, and assisting members with permanent e-cycling services. To keep Members up to date on our activities, we publish a quarterly newsletter. We also support activities of Mid-Atlantic Chapter of Solid Waste Association of North America (SWANA) by editing and producing a quarterly newsletter. To keep current on the latest industry news, we participate in Solid Waste Association of North America Maryland Recycling Network and Maryland Department of the Environment regional meetings and conferences.

These are only a few highlights from a very productive and dynamic year. Although the Authority's other accomplishments, such as reviewing monthly plant performance reports, monitoring compliance at various facilities, completing emissions reports or inspecting transfer stations, may sound routine, they are just as important. These tasks ensure that the renewable energy produced and the resources recovered result from environmentally sound integrated waste management practices and improve the quality of life for Marylanders.

The Authority's achievements are credited to the outstanding dedication and hard work of our board of member representatives and staff. These individuals bring unparalleled waste management knowledge and experience to all of our projects. Their expertise and innovative ideas enable the Authority and our members to manage increasingly valuable resources, generate much needed renewable energy, reduce environmental impact, increase sustainable waste practices and reduce the need for new landfills in our region, and throughout the U.S.

— Robin B. Davidov, Executive Director

SITE VISIT TO KING GEORGE LANDFILL KING GEORGE COUNTY, VA



Representatives from Anne Arundel County, Howard County and the Northeast Maryland Waste Disposal Authority conducted their annual site visit to the King George County Landfill in Virginia on October 20th and 26th.

The King George County Landfill site is 685 acres; 292 acres of it are designated for landfill. The landfill has been in operation for 13 years and annually receives an average of nearly 5,000 tons per day, with approximately 2,500 tons per day coming in by rail from Maryland's Annapolis Junction Transfer Station (see picture below, right). If this disposal rate continues, the County



estimates there are 18-20 years of MSW disposal capacity remaining. Each year there is a new 6-10 acre cell opened for accepting MSW (see picture above, left).

Waste Management leases the landfill site from King George County, Virginia and has sole responsibility for developing and managing the landfill. The Authority contracts with Waste Management for the acceptance, transportation and disposal of municipal solid waste

(MSW) delivered by Anne Arundel and Howard Counties to the Annapolis Junction Transfer Station in Jessup, Maryland. The purpose of the annual facility site visit is to inspect the landfill, review operations and discuss regulatory compliance. Thomas Cue, site manager for Waste Management, conducted the tour.

Waste Management is using the King George Landfill to conduct a pilot study using algae to treat the landfill's leachate (see bottom picture). The company contracted with Kent BioEnergy to implement the small scale study which has been in operation for about one year. The algae that is grown removes the phosphorus and nitrogen from the leachate. The resulting algae could be turned into a bio-fuel as well. By treating leachate using this method, Waste Management is not only saving money on the disposal and treatment of the leachate, they are treating it in an environmentally friendly manner, and also avoiding carbon emissions from hauling leachate to Richmond for treatment.

New to King George Landfill is their Landfill Gas to Energy Facility. Landfill gas from the site is collected and sent to the LFGE facility which utilizes three (3) turbines to generate and export approximately 6 megawatts of electricity to the local electric distribution system or grid. Each turbine consumes an estimated

The landfill has been in operation for
13 years and annually receives an
average of nearly 5,000 tons per day.

1460 scfm of landfill gas (this amount can vary due to gas quality and ambient temperatures). The excess gas is burned in one of three onsite flares. Waste Management plans to expand their facility by adding a fourth turbine in the near future.

For more information please contact Amanda Moore at the Authority — 410-333-2730, amoore@nmwda.org.



UNITED STATES CONFERENCE OF MAYOR'S MUNICIPAL WASTE MANAGEMENT ASSOCIATION'S FALL SUMMIT

Baltimore was the site for the national Municipal Waste Management Association's (MWMA) 2010 Fall Summit held September 28th through October 1st. Colonel Al Foxx, Baltimore City Director of Public Works, welcomed the participants to Baltimore City. Experts in the areas of Best Practices in Recycling, Green Vehicle Technologies, Benchmarking and New Technologies for Waste Reduction shared their insights on these topics with over 70 public and private sector environmental professionals who attended the Summit. Additionally, Summit participants were briefed on relevant legislative and regulatory issues. A traditional event at each conference is a tour of outstanding local solid waste and recycling projects. This year, attendees toured the Baltimore Refuse Energy Systems Company (BRESKO) plant to see how over 2,000 tons of a waste each day is converted into steam and electricity. The second site visited was the Baltimore Convention Center's on-site food waste recycling project.

"Baltimore provided a great location for this year's meeting," said the Authority's Executive Director Robin Davidov, who also served as MWMA's 2010 President. "It gave our colleagues the opportunity to tour the BRESKO plant which provides power to many downtown office buildings. Participants also toured the Baltimore Convention Center which is the only convention center in the country that recycles food waste." Summit participants saw how the food waste is composted, then used to nourish the Convention Center's rooftop herb, vegetable and flower gardens.

— ✂ —
"Baltimore provided a
great location for this
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— ✂ —

Robin Ennis, Chief of Collection Services for Montgomery County, participated in a panel presentation on Green Vehicle Technologies. The County requires that all refuse and recycling trucks be fueled with compressed natural gas (CNG), which reduces nitrogen oxide emissions (NOx) by 80% and greenhouse gas emissions by as much as 15%. The first CNG trucks started their routes in April 2010 and the entire fleet will use CNG by June 2012.

"CNG is cleaner, cheaper, and quieter than diesel fuel and it's domestic," noted Ennis. "Replacing our diesel powered fleet with trucks powered with compressed natural gas has the same emissions benefits as taking 33,000 passenger cars off the road annually."

Ennis also discussed some of the challenges of converting to CNG vehicles, including vehicle cost and fuel efficiency and the limited availability of fueling stations.

On the legislative and regulatory front, attendees learned about new proposed EPA limits on industrial, commercial and institutional boilers, climate change legislation and the EPA's "tailoring rule" which limits greenhouse gas emissions.

"The Summit provided a forum where professionals in the environmental industry could learn about the latest developments, exchange ideas, share successes and challenges and discuss best practices," notes Davidov. "I truly appreciate all the efforts that the speakers, attendees, staff and volunteers contributed to make this Summit so successful."

MWMA is the environmental affiliate of The United States Conference of Mayors. It is dedicated to and driven by the needs of municipal solid waste directors, environmental commissioners and public works professionals. For more information on the MWMA or to download the full presentations from the Fall Summit, go to www.usmayors.org/mwma.



Mayor Rawlings-Blake with Wheelabrator Vice President, Technical Services, Arthur Cole and Wheelabrator Baltimore Plant Manager David Jones.

ANNUAL GARBAGEMAN APPRECIATION DAY

On Friday, October 29th, Baltimore officials took time to give their public "thank you" to the crews that keep the City's and Counties' streets clean with the annual "Garbageman Appreciation Day." Mayor Stephanie Rawlings-Blake, City Council Members, public works department managers and Wheelabrator employees served a barbecue lunch to drivers exiting the BRESKO Waste-to-Energy Facility. Wheelabrator Baltimore hosts the annual event to thank the hundreds of private and municipal solid waste collection workers from Baltimore City and surrounding Counties who haul more than 340 truckloads and up to 2,250 tons of garbage to the waste-to-energy facility every day. Wheelabrator also uses the event to thank the crews for their contributions to the company's safety record, which has earned Voluntary Protection Program (VPP) Star certification from the Occupational Safety and Health Administration (OSHA) – the agency's highest recognition. Mayor Rawlings-Blake thanked representatives from Wheelabrator Baltimore for hosting the event, providing excellent waste disposal services and for being such a terrific corporate neighbor to the Westport community.

◀Col. Foxx welcoming the MWMA conference participants

LANDFILL-GAS-TO-ENERGY FACILITY TO BE BUILT IN ANNE ARUNDEL COUNTY WILL CREATE GREEN ENERGY



Anne Arundel County will be joining other counties in Maryland and across the United States in their pursuit to create and utilize renewable "green" energy. Agreements were signed in October between the Authority, Anne Arundel County and Landfill Energy Systems to design, construct and operate a

Landfill-Gas-to-Energy facility. The facility will be located at the Millersville Landfill and Resource Recovery Facility (MLFRRF) and utilize the landfill methane gas that is currently being destroyed in a flare and convert it into electricity. The facility will consist of two (2) Caterpillar 3520 engines, which will produce a combined output of 3.2 megawatts of renewable energy.

A portion of the project will be funded by a federal energy conservation block grant through Anne Arundel Community Development Services (ACDS). The project is currently in the design and permitting phase and it is anticipated to be in commercial operations in the summer of 2012.

MARK YOUR CALENDAR JANUARY 18TH – 20TH

EPA's Landfill Methane Outreach Programs (LMOP)
14th Annual Conference and Expo in Baltimore

For more information go to:
www.epa.gov/lmop/workshops/14th.html



WASTEWATCH

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